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XX.—On a Collection of Mammals from Chiromo and Cholo, Ruo, Nyasaland, made by Mr. Rodney C. Wood, with Field-notes by the Collector. By P. S. KERSHAW.

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This interesting collection of beautifully prepared specimens is the result of the labours of some years, and adds very considerably to our knowledge of the distribution of the small mammals of the district. Practically all the collection was made at Chiromo and Cholo in the Shiré Valley, about 17° S., 35° E.

The fine series of Chiroptera call particularly for notice, there being no less than twenty-eight species represented, of which two are new to science. A third novelty is *Uranomys woodi* from Cholo.

Mr. Wood's field-notes are distinguished by inverted commas.

#### 1. Gulago (Otolicnus) moholi, A. Smith.

3. 5, 298. Cholo, Ruo.

After a comparison of all the material in the British Museum, I am of opinion that G. mossambicus, Pet., is identical with G. moholi. The type of the latter is much faded, but more recent specimens from the neighbourhood of

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the type-locality are indistinguishable from B.M. specimens

from Tette, the type-locality of G. mossambicus.

"Found throughout Nyasaland, but not very common except in the low country, where it lives in the dense thickets and is rarely seen. Also lives among the leaves of the Hyphæne-palm and feeds on its fruit. Said by natives to eat the gums which exude from various Acacia-trees. Also various other wild fruits and insects generally. Mang'anja name 'Changa.'"

2. Epomophorus wahlbergi, Sund.

♂. 20; ♀. 124, 196, 237. Chiromo.

3. Epomophorus crypturus, Pet.

9. 447. Cholo.

### 4. Taphozous mauritianus, Geoff.

♀. 190. Chiromo.♀. 446. Cholo.

"Have seen this bat resting on the stem of a large tree head downwards, holding with thumbs as well as hind feet. When disturbed by endeavouring to catch it with a net, it moved with astonishing rapidity in any direction, keeping body in same position. The legs and wings moved so rapidly as to be almost invisible to the eye, the movement at once reminding one of that of the local African flat spiders (Pedipalpidæ) on walls in houses. Does not appear to be at all common."

### 5. Nycteris capensis, A. Smith.

3. 58, 79, 146, 187, 243, 244; 9. 78, 103, 152, 245. Chiromo.

Nos. 243 and 244 in the red phase.

## 6. Nycteris hispida, Schreb.

3. 147, 148; 9. 145. Chiromo.

"All the species of Nycteris appear to have much the same habits locally. Their chief haunt is the hollows of large trees in the forests, particularly the tree known locally by its native name 'njale,' a species of Sterculia, which

nearly always gets completely hollow for all the length of its trunk when very large and old. I have never examined one of these trees without finding numbers of Nycteris in it, and they appear to be extremely numerous in the low country up to 1000 or 2000 feet; but, so far, I have not managed to take them in the 'Highlands' of 3000 ft. and over. They also frequent hollow fallen trees, culverts, etc., but I have never found them in hollow palms, although I have examined hundreds of them. This is possibly because the latter are almost always tenanted by numbers of Scotophilus, Mops, etc. Occasionally found in the roofs of houses and deep holes in ground."

#### 7. Nycteris oriana, sp. n.

2. 57, 312. Chiromo.

A member of the athiopica group, with long ears and tail,

approaching N. luteola, Thos., in size.

The body is clothed with long soft hairs, a dirty white colour on the dorsal surface for the greater part of their length, tipped with brown, the general result being a light pinkish brown. The hairs of the ventral surface are écrudrab throughout their length. The edge of the wing-membrane from the ankle for about 21 mm. is fringed with light-coloured hairs. The shape of the tragus is as that figured by Dobson in the 'Catalogue of Chiroptera' for N. macrotis.

Type. Female. B.M. no. 22, 4, 25, 3. Original number 312. Collected on June 7th, 1918, and presented by

Mr. Rodney C. Wood.

Type-locality. Chiromo, Shiré Valley, Nyasaland.

Dimensions of the type :-

Forearm 53 mm.; head and body 67.5; tail 63; ear 33; thumb 15.2; third finger—metacarp. 44, 1st ph. 24, 2nd ph. 29; fourth finger—metacarp. 42.5, 1st ph. 16, 2nd ph. 15; fifth finger—metacarp. 45, 1st ph. 15, 2nd ph. 16.2; tibia 25; foot 11; tibia and foot (including claws) 37.

Skull: greatest length to tip of canine 22.3; zygomatic breadth 13.7; breadth of frontal shield 8.4; length of upper tooth-row 8.1; p<sub>4</sub> minute and internal to the tooth-row, not

in it, as in N. athiopica and N. luteola.

N. oriana does not appear to be nearly related to any of the species in the athiopica group. In size it approaches N. luteola, Thos. (which Mr. Thomas now agrees should be elevated to specific rank), but differs widely from it in other respects, such as in the length of the fur (13 mm. in oriana,

12米

9 in luteola), and in its colour and texture, the dimensions of body and skull, the heavier dentition, the position of  $p_3$ , and the much larger frontal shield.

### S. Rhinolophus hildebrandti, Pet.

#### 9. 151. Chiromo.

## 9. Rhinolophus augur zambesiensis, K. And.

3. 197; 9. 26, 144. Chiromo.

3. 436. Cholo.

### 10. Rhinolophus lobatus, Pet.

♂. 27, 192, 195, 201, 392; ♀. 38, 123. Chiromo.

9. 8. Ruo.

Nos. 8, 27, 38, 123, and 392 in the red phase.

"Generally found hanging from the roof in grass-roofed buildings, native huts, holes in ground, etc."

### 11. Hipposideros caffer, Sund.

3. 54, 62, 171, 180, 221; 9. 53, 59, 63, 64, 70, 82, 102, 105, 188, 194. Chiromo.

2. 23. Chikonje, near Chiromo.

Nos. 171, 180, and 221 in the red phase.

"Same habits as Rhinolophus, greatly frequenting buildings, culverts, etc."

### 12. Hipposideros ruber, Noack.

3. 179. Villa Bocage, Shiré River, P.E.A.

2. 163. Chiromo.

Both in the red phase.

## 13. Hipposideros commersoni marungensis, Noack.

d. 215, 222, 236; Q. 155, 358, 361. Chiromo.

9. 429. Cholo.

"When a large species of wild fig, known locally as mtundu'-tree, ripens its fruits all along the stems of its branches, these bats come around in hundreds, like swarms of fruit-bats, land on the tree and seize the fruits, fragments of

which are scattered by them all around, and are often carried to other trees near by, and pieces dropped there. The natives state that they eat the fruit, and call them by the same name as the true fruit-bats, i. e. 'mleme.' I wrote this to Mr. Oldfield Thomas, who replied that no Hipposideros was a fruiteater. On examination of the figs I found that practically every fruit was attacked by a large weevil, the larvæ of which were inside the fruit. It is therefore probable that it is on these weevil larvæ that the bat is really feeding, and that they only seize the fruit to tear it apart to get the larvæ. But in certain cases the fruit is often chewed into a pulp, as I have found the remains of it in this condition everywhere around the trees. Native observation is nearly always unreliable, and just seeing the bats seizing the fruits would be sufficient for them to believe that they were feeding on them. While the bats are at the trees and dashing on and off the branches the air is filled with their rather musical piping note, and the speed at which they travel makes a great 'rush' of wings. At other times they are not at all in evidence, and I have never found them in any 'colony.'"

## 14. Myotis bocagei, Pet.

3. 219, 401; 9. 175. Chiromo.

J. 125, 128, 130; 9. 126, 127, 129, 131. Tekerani, Ruo.

"Inhabits hollow trees in forest."

### 15. Myotis welwitschii, Gray.

3. 420. Cholo.

2. 28. Chiromo.

There seems to be no doubt that Vespertilio venustus, Matsch., is a synonym of this species. The only difference was one of size. The forearm of the type of welwitschii is given in Dobson's Catalogue as measuring 52 mm. I find that in reality it measures 54. This measurement for venustus is given as 56.5. The two specimens now to hand measure 58.2 and 55 respectively, while another specimen in the B.M. collection from the Transvaal measures 54.

"Appears to be very uncommon."

#### 16. Pipistrellus nanus, Pet.

3. 67, 72, 75, 153, 157, 172, 241, 242; 9. 49, 50, 52, 66, 68, 69, 74, 76, 164, 183, 185, 186, 421, 439. Chiromo.

d. 266, 329; Q. 267, 268, 269, 330, 440, 441. Cholo. "Very common everywhere, coming freely into houses. Three examined contained two young each (21st Oct., 1917)."

## 17. Glauconycteris variegatus papilio, Thos.

3. 120. Chiromo.

"Apparently very rare. This was the only one taken in five years, on branch of tree in forest."

### 18. Eptesicus megalurus, Temm.

J. 24. Chiromo.

### 19. Eptesicus rendalli, Thos.

♂. 200; ♀. 162, 384. Chiromo.

### 20. Scotophilus nigrita dingani, A. Smith.

3. 48, 132, 137, 138, 139; 9. 136, 300. Chiromo.

2. 310, 385 (skulls only).

No. 300 is without the usual yellow tinge on the under surface, and has a rather smaller skull and shorter fur than the other specimens. On the whole, it answers very well to Peters's description of S. planirostris, which is found together with dingani in Tette. I am treating the present specimen as a young dingani, which probably planirostris will prove to be.

### 21. Scotophilus viridis, Pet.

3. 84, 85, 159, 160, 189, 191, 193, 380, 403; \$. 381. Chiromo.

### 22. Scotophilus gigas, Dobs.

3. 83, 372 (skull only); 9. 170. Chiromo.

3. 239. Mtondo, Ruo.

Since this species was first described in 1875 no other specimens have been added to the B.M. collection. The type-locality is Lagos, so that this species, like *Eptesicus* rendalli, has a wide range.

"I have only found the genus Scotophilus in hollow or large holes in Hyphæne-palms. The forest of the low

country round the Shiré River (Ruo and West Shiré districts), and also that round Lake Nyasa and the Upper Shiré River, is full of these Hyphæne-palms. In such places Scotophilus is very common, and as many as twelve or twenty are sometimes got out of one hollow palm, which they inhabit together with all species of the 'free-tailed' bats (Chærephon, Tadarida, Mops, etc.). I have never found them in any other species of tree, but they probably inhabit hollow Borassus-palms as well where these are found. They are often noticeable at dusk hawking cotton bollworm moths and other insects over cotton-fields cleared in this type of forest, where the hollow dead palms have been left standing, and in this way must do a lot of good.

"They appear slightly oily to the touch when alive, and

have a somewhat characteristic odour."

#### 23. Scotweus woodi, Thos.

3. 168, 173 (type); 2. 167, 169, 230. Chiromo. This species was described from this collection by Mr. Thomas in March 1917 (Ann. & Mag. Nat. Hist. (8) xix. p. 280).

"Only taken among the leaves of young low Hyphænepalms in forest, where they appear to be moderately numerous, though rarely seen. Several may be taken together nestling down among the leaves."

24. Scoteinus schlieffeni australis, Thos. & Wrought.

♂. 150, 393, 398; ♀. 158, 181, 182, 184, 246, 397. Chiromo.

"In all cases taken in house in forest in the evening."

25. Miniopterus natalensis, A. Smith.

3. 211, 305, 400; \$. 399. Chiromo.

#### 26. Kerivoula lucia, Hint.

3. 438. Cholo.

"Taken in clump of bamboos in forest full of bamboos; not seen elsewhere."

#### 27. Mops midas, Sund.

3. 39, 216, 217, 374, 378; 9. 375, 383. Chiromo.

### 28. Mops angolensis, Pet.

3. 176, 177, 178. Villa Bocage, Shiré River, P.E.A.

3. 357, 376, 382; 2. 377. Chiromo.

8. 21. Chikonje, Ruo.

## 29. Charephon limbatus, Pet.

3. 46, 81, 88, 100, 304; \$\circ\$. 32, 87, 89, 90, 91, 92, 101,

115, 202, 220. Chiromo.

"The same remarks made as regards Scotophilus apply entirely to Mops and the other genera of 'free-tailed' bats, they being generally found in hollow palm-trees. Great numbers sometimes congregate in one tree. But Chærephon is also found in buildings of brick with corrugated iron roofs, where they live on the rafters between the wood and iron in hundreds sometimes, and are a great pest, owing to the fearful mess and smell they make. They enter these roofs generally through the small space between the iron ridging and wall, and, where there are many ways in, appear in all cases to frequent only one. At dusk I have seen a stream of them come out of one of these holes with incredible rapidity, defeating the eye to watch them, and reminding one of the stream of pellets from a gun. They also hawk cotton bollworm, and other than their obnoxious habit of inhabiting house-roofs (but apparently never grass-roofs), do much good in consequence. On rarer occasions I fancy Mops also inhabits house-roofs, but not nearly so commonly as Chærewhon. All are very oily to the touch, and their smell is very characteristic and strong."

## 30. Rhynchocyon cirnei, Pet.

3. 258; 9. 287. Cholo.

2. 229. Chiromo.

"Generally distributed throughout the country, but most common where there are big thickets of jungle, such as in the Ruo district. Native name 'Sakwimbala.'"

## 31. Petrodromus tetradactylus, Pet.

3. 25, 96; 9. 29, 108, 149. Chiromo.

♀. 251. Cholo.

"Native name 'Sakwi."

### 32. Nasilio brachyrhynchus, A. Smith.

3. 122, 391; 9. 95, 121, 143. Chiromo.

"Both Rhynchocyon and Petrodromus have the curious habit of striking the ground sharply with the tail, so as to produce a rapping sound, often quite loud. In the dense thickets it can be heard all day if one listens carefully for it. I have frequently sat and watched them doing this only a few yards from me, and often several will be doing it at the same time quite near each other, but taking absolutely no notice of each other. Sometimes one individual will stop and rap every few feet. They often appear to listen after it, but not always. It is possible that Nasilio does it also, but I have never seen it do so. It, however, seems to inhabit open forest much more than the other two genera, and in the long grass is not often seen. In the thickets inhabited by the others there is no grass, and only dead leaves and small plants, which enables them to be easily seen. They stop at each puff of wind, as if suspicious, and hold the head up in the air, with the curious mobile tip of the nose moving about testing the wind, and reminding one forcibly of an elephant's trunk doing the same.

"The natives hunt them for food, and catch them by placing long narrow basket-traps in their runs, when they are out of the thickets, and then driving them; whereupon they rush down the runways and dash blindly into the traps, forcing themselves more and more to the narrow ends, and thus

being unable to get out.

"Rhynchocyon remains in the thickets much more strictly than Petrodromus.

"Native name 'Dhundu."

#### 33. Crocidura hirta, Pet.

3. 94, 98, 116, 204, 205, 206, 207 (juv.), 209, 210, 338, 389, 395; \$\dip\$. 44 (juv.), 45 (juv.), 47 (juv.), 99, 117 (juv.), 203, 208, 336. Chiromo.

"Very common in low country. Native name 'Sunkwe."

### 34. Genetta rubiginosa, Puch.

3. 234 (juv.), 386. Chiromo. "Quite common. Mang'anja name 'Mwiri.'"

35. Herpestes (Calogale) melanurus zombæ, Wrought.

J. 174. Near Chiromo.

2. 290. Cholo.

"Common throughout the country. Generally goes about singly. Native name 'Likongwe.'"

#### 36. Mungos mungo, Gmel.

= Crossarchus fasciatus, Desm.

3. 56. Near Chiromo.

"Common in low country, where they go about in bands of ten to twenty or thirty, with much 'chirruping' all the time, while they scratch about and hunt for insects; sit up on hind legs and tail when they think danger is about, and then, at a shrill cry from one or other, all dart away to cover. Never seen singly. Easily tamed and good pets. Very fond of eggs. Often caught by natives in noose-traps baited with a piece of chicken. Native name 'Msulu.' I once saw a troop of six up a half-rotten tree full of holes and hollow inside, and all were just peeping out of the holes at me.

"One I kept as a pet was very fond of snakes. It had the usual curious mongoose method of breaking eggs by either grasping them in the front feet and then hurling them with great violence against a wall, or stone, or tree, after first raising them up in front of it to get a good throw, or else by merely flipping them from the ground. In both ways the mongoose stands with its back to the object and sends the eggs through the hind legs. Gets very annoyed if egg does not break easily. Can emit an appalling odour when alarmed. The adults are not so easily tamed. Note of annoyance or alarm much deeper than the usual 'chirrup.'"

#### 37. Heliosciurus mutabilis, Pet.

3. 104; 9. 71, 80, 301. Chiromo.

"Common in the low country in dense thickets and jungles, where are very many tall great trees and much undergrowth, lianas, etc. They live in holes in the trees, and do not appear to wander far outside these thickets, feeding on nuts and fruits of the various trees therein. Native name Gologolo."

#### 38. Paraxerus palliatus, Pet.

♀. 402. Ruo.

### 39. Paraxerus cepapi sindi, Thos. & Wrought.

♂. 118, 347, 348, 349. Chiromo.
 ♂. 119. Namulambo, near Chiromo.

"Only found in open forest-country, never in the thick jungles, particularly where the 'msania'-tree (mopani of Rhodesia), Copaifera mopane, abounds. In places they are very numerous, and sometimes many may be seen together rushing about among the low trees or on the ground. They do not often enter thick forests of this 'msania' tree, but remain in the open forest on the outskirts. Native name 'Tsinde.'"

#### 40. Taterona nyasæ shirensis, Wrought.

♂. 154, 223, 231; ♀. 37, 109, 390. Chiromo.

♀. 254, 255, 425. Cholo.
 ♀. 22. Chikonje, Ruo.

"Very numerous everywhere, in both high and low country. Mang'anja name 'mbewa.' In some places it forms a staple article of diet among all tribes of natives, and is frequently seen in the markets exposed for sale, split open, and toasted on sticks, being sold in this condition, and much esteemed. A great garden pest."

### 41. Dendromus whytei, Wrought.

3. 277, 302, 416, 417, 443, 445; \$\circ\$. 307, 367, 405, 408, 426. Cholo.

"Lives in grass-nests in small shrubs or long grass-stems, sometimes among the roots of tall standing grass. All the tree-mice are generalized by the natives under one name—'sonto.' Have often found their nests among the fruit of a bunch of bananas on the plant."

#### 42. Dendromus (Poemys) nyikæ, Wrought.

♂. 285; ♀. 292. Cholo.

#### 43. Steatomys pratensis, Pet.

- 3. 65, 97, 110, 212, 213, 214, 218; \$\circ\$. 60, 77, 93. Chiromo.
  - ♂. 247, 260; ♀. 278, 323, 324. Cholo.

♀. 318, 320. Makwira's, Ruo. 3. 313. Mlanje Road, Ruo.

"Said by natives to make its own holes in the ground.

Mang'anja name 'Nsana.' Eaten by most natives, and said to be very fat and good. Also a garden pest. Common throughout the country."

### 44. Grammomys surdaster, Thos. & Wrought.

3. 369; 9. 224, 364. Chiromo.

3. 296, 309, 442; 2. 289, 297. Cholo.

"Makes small nests of a few blades of dry grass in holes in trees. A forest-dwelling genus. Have also found the nest in the bracts of a dry maize-cob on the plant, and also in small bushes."

#### 45. Grammomys ruddi, Thos. & Wrought.

♂. 133, 140; ♀. 134, 135, 141, 142. Chiromo.

"Taken in hole at top of Hyphæne-palm. Also in grass-

nests in trees, similar to G. surdaster.

"These two species are called 'sonto' by the Mang'anja, as well as all other tree-mice."

#### 46. Rattus rattus alexandrinus, Geoff.

♂. 51, 356; ♀. 33, 41, 345. Chiromo.

2. 282, 503. Cholo.

"Very common everywhere. Mang'anja name 'Khoswe."

## 47. Rattus (Æthomys) namaquensis arborarius, Pot.

3.365, 371, 396; Q. 228, 370, 387. Chiromo. "Taken in grass-nest in bush; in tall, hollow, dead Hyphæne-palm; on ground in forest; below some timber stacked in grass-shed."

#### 48. Rattus (Mastomys) coucha microdon, Pet.

3. 107, 112, 198, 342, 363; \$\circ\$. 61, 111, 113, 199, 233, 235, 314, 315, 340, 341, 346. Chiromo.

3. 327. 328, 360, 422; \(\mathref{c}\). 248, 291, 294, 325, 326, 437.

Cholo.

2. 317, 319. Makwira's, Ruo.

This subspecies averages larger than coucha proper, is browner—i. e., less grey,—has shorter fur, and a proportionately longer tail. There is, however, very great individual variation in this species.

"Makes holes in the ground, and often a grass-nest at the end of them. All species of Rattus are called 'Khoswe' by the Mang'anja, and are eaten by some, but others will not

touch them. They are bad house pests, nesting almost anywhere in houses, and doing great damage to foodstuffs, fabrics, etc. In the low country they are often badly infested with the larvæ of the 'mputsi'-fly (Cordylobia and Auchmeromyia)—myiasis,—chiefly in the feet, which I have seen swollen to a terrible size and suppurating, practically every rat killed in the house being attacked."

#### 49. Mus musculus, Linn.

3. 279, 283, 286, 424; 9. 295. Cholo.

"Common everywhere in the highlands. Have not met

with it in the lower country.

"Native name 'Tsibwi.' This is probably a Ngoni word, also used by the Mang'anja of Ruo district."

### 50. Leggada bella marica, Thos.

3. 337. Chiromo.

d. 293, 352, 353, 366, 406, 409, 411, 413, 423, 427;

2. 351, 354, 412, 414, 415, 418, 419, 428. Cholo.

"Very common throughout the highlands, where it is found in holes in the ground and among refuse, particularly in native gardens and maize-fields, where it makes small nests of grass among the maize-stems and fallen grass. It is also very common in the open type of 'msuku' (*Uapaca kirki*) forest found all over the highlands of Nyasaland. It is said by the natives often to close the mouth of its burrow with small stones, and it stores grain in chambers in the burrow.

"Native name 'Pido.'"

### 51. Cricetomys gambianus subsp.

d. 306, 308, 331; ♀. 332. No locality given. (Skulls

only.)

"Lives in huge burrows often twenty yards or so in length near the banks of mountain-streams. Fairly common all over the highlands. Makes great depredations among the native maize-crops, storing up immense quantities of grain in chambers in its burrow. It is trapped by the natives with fall-traps of logs of wood, and is eaten by all tribes. Does not appear to exist in the low flat country of the Shiré River, but only where there are hills. Given that factor, it is found at all elevations. Its place appears to be taken on the low plains by the cane-rat (Thryonomys).

"Native name 'Bwampini."

### 52. Uranomys woodi, Hint.

2. 280 (type). Cholo.

This species was described from this collection by Mr. Hinton in April 1921 (Ann. & Mag. Nat. Hist. (9) vii. p. 369).

"Said never to make its own burrow, but to take those of other mice. The only specimen I managed to obtain was taken in the burrow of a mole-rat (Heliophobius argenteocinereus). I have also been shown holes at the base of Uapacatrees among the roots said to be used by this mouse, but excavation brought none to light. A native told me that they did not burrow these holes, but lived among the decayed roots of the tree. This is very probable in the case of Uapaca-trees ('msuku'), as their roots are nearly always partially decayed. The species appears to be known, though not often taken, and this native name also includes other genera of mice, as is so often the case. I am inclined to think that they are rare everywhere, as, although I offered a large reward for more specimens, none were ever brought me.

"Native name 'Sakachenzi."

#### 53. Saccostomus campestris, Pet.

3. 30, 31, 34, 40, 42; \$\chi\$. 35, 36, 55, 316. Chiromo. "Not found in the Cholo highlands at all, but only in the hot low country of the Shiré River plain, where it is very numerous. Common in the forest covering these plains, native gardens, and occasionally in holes below native huts; in this case there being an exit always some way outside, as well as one inside the hut. Greedily eaten by some natives, but not by all; apparently a question of individual taste, not tribal prejudice. Digs its own burrow.

"Native name 'Jugu.'"

#### 54. Acomys selousi, de Wint.

3. 321, 322, 410. Cholo.

2. 339. Chiromo.

"I have taken this species in old ant-heaps (termite) on forested hills, and in holes generally. It also is said not to make its own burrows, but to use those of other mice. I find that the Mang'anja name for these spiny mice is also 'Sakachenzi,' and it is undoubtedly this species that is most commonly referred to under this name, Uranomys woodi being probably only called so for want of a better name, being not nearly so well known or so often seen."

#### 55. Pelomys fallax, Pet.

 ♂. 114, 165, 166, 227;
 ♀. 350.
 Chiromo.

 ♂. 333, 355, 359;
 ♀. 334, 335.
 Cholo.

A subspecies—P. f. insignatus—which lacks the dorsal stripe has been described by Osgood from Fort Hill, North Nyasaland. The abundant material in the British Museum shows that the presence or absence of this stripe is not a constant character, both striped and stripeless specimens being found living side by side in many localities in Mashonaland and Nyasaland. In the present series no. 165 has a poorly defined stripe and nos. 350 and 334 show a faint trace of one.

"Numerous all over country. Taken in holes in ground, and also makes nests of grass in trash like fallen maize-stems

or thick, long, dry grass.
"Native name 'Bvumbi."

The others are stripeless.

56. Lemniscomys griselda calidior, Thos. & Wrought.

♂. 156, 232, 240, 311, 368; ♀. 362. Chiromo. ♂. 250, 262, 407; ♀. 281, 344, 444. Cholo.

"Numerous all over country. Taken in holes in ground in forest of all types.

"Names 'Mphera' and 'Mphoni."

### 57. Otomys angoniensis, Wrought.

2. 284. Cholo.

"The only one taken was among grass in a clearing on a wooded hill not far from a stream. The natives say it lives near streams as a rule, and makes its nest among grass and vegetation on banks, but not in holes.

"Native name 'Thiri,' probably 'Chingoni.'"

#### 58. Graphiurus microtis, Noack.

3. 288, 432, 433, 434; \$. 404, 430, 431, 435. Cholo.

♀. 238. Lilanje, Ruo.♀. 379, 394. Chiromo.

"Dormice are common all over the country, especially where the 'msuku'-tree (*Uapaca kirki*) abounds. This tree is often hollow in places, or has large holes in it, where branches have fallen and the heart decayed, and it is in these places that their nests are found, at any height from the ground, made of dry leaves of any small-leaved tree, such as *Brachystegia* sp., which is also a characteristic tree of this 'msuku' forest. I have also noticed it living in the grass roofs of huts, or in holes among the pole and mud walls.

The natives have a curious idea, universally believed in this country, that it eats rats and drives them out of houses; so they are often placed in houses for that reason! Their name for it—'Kadiamlamu'—means' The little one who eats his brother-in-law.' Also taken in hollow dead palms in the forest in the low country."

#### 59. Heliophobius argenteo-cinereus, Pet.

3. 249, 259, 265, 270, 272, 273, 275; §. 252, 253, 256, 257, 261, 263, 264, 271, 274, 276. Cholo.

3. 226; Q. 225. Chikonje, near Chiromo.

"Apparently only exists where there are hills, at any altitude, but not on the Lower Shiré plains. Makes long burrows anything up to 20 yards long a few inches below surface, then deeper to about 2 to 3 feet, where the living chamber is made. Very common in the Cholo highlands. Rather sluggish in daylight, and apparently then quite blind, as they snap at things or nothing in a blind reasonless way. Natives handle them quite freely by picking them up by the hair on the nape of the neck or top of head, when they are quite helpless. Eaten by all tribes, except those Mohammedan ones who do not eat any of these things. Eats roots underground.

"Mang'anja name 'Nanfuko."

#### 60. Manis temmincki, Smuts.

3. 343. Masengere, near Chiromo.

"Taken walking along path in forest in daylight. When disturbed it rolled up into a ball, but after a few minutes unrolled and walked off again. This occurred any time it was put down. After a few times it took no notice of people around, but walked slowly about, only rolling up if touched. The gait was slow and on hind legs, only touching ground with the backs of the fore-claws occasionally, the tail steadying it when it stopped for a moment. Appears to feed exclusively on termites, and possibly some ants. The flesh is considered a great delicacy, and in the olden days was a chief's dish only.

"Mang'anja name 'Nkaka.'".

"In the foregoing the natives spoken about are the large Mang'anja tribe of the southern parts of Nyasaland, and particularly the Cholo highland and Shiré River lowland districts. All other natives of different tribes are strangers in these districts."